

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-6 are pending with Claim 1 amended by the present amendment.

In the Official Action, Claims 1-6 were rejected under 35 U.S.C. § 112, first and second paragraphs; and Claims 1-6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ikeda et al. (U.S. Patent No. 7,017,264, hereinafter "Ikeda") in view of Tsukamoto et al. (U.S. Patent No. 6,703,565).

Applicants traverse the rejections under 35 U.S.C. § 112, first and second paragraphs and note that Applicants' originally filed specification recites "then, the porous sheet 1 is selectively irradiated with energy beams to carry out the pattern exposure of the porous sheet to form latent images 5a for writing portions in latent images 6a for via contacts (see Figs. 1C and 2C). Thereafter, the latent images 5a and 6a are filled with a conductive material by, e.g. plating, to form wiring portions 5b and via contacts 6b (see Figs. 1D and 2D).<sup>1</sup> Thus, the specification supports the claimed feature of "after said selectively irradiating, filling pores in the latent image of the porous member with a conductive material to form a conductive portion connected to the electrode," and this feature is clear.

Applicants submit that the rejection under 35 U.S.C. § 103(a) does not make a *prima facie* case of obviousness because the rejection does not provide adequate citations within the applied references for each feature recited in Applicants' previously pending claims. Thus, Applicants are left to guess about where within the applied references specifically recited features are taught. However, to advance prosecution, the claims are amended without the introduction of new matter based to more clearly describe and distinctly claim Applicants'

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<sup>1</sup> The specification page 10, lines 13-19.

invention. Applicants respectfully request any future rejection provide specific citations for each rejected claim element recited in each independent and dependent claim.

Briefly recapitulating, amended Claim 1 is directed to an electronic device connecting method that includes mounting an electrode of an electronic device closely on a sheet-like porous member having pores, the porous member having a photosensitive layer formed on an inner surface of pores, the photosensitive layer producing or eliminating an ion exchange group by irradiation with energy beams on the inner surface of the pores. The method also includes selectively irradiating a predetermined region of the porous member, on which the electronic device is mounted, with energy beams thereby exposing the photosensitive layer to form a latent image in an irradiated or non-irradiated portion of the porous member, the predetermined region including a portion close to the electrode. After selectively irradiating, pores in the latent image of the porous member are filled with a conductive material to form a conductive portion connected to the electrode. The porous member, in which the conductive portion is formed by filling, is then bonded to the electronic device.

Tsukamoto describes a method of manufacturing a printed wiring board, wherein the wiring pattern 113 is first formed on a releasable supporting sheet 111,<sup>2</sup> and in a next step, the wiring pattern 113 together with the releasable supporting sheet 111 is transferred onto an adhesive insulator sheet 114, so as to connect the wiring pattern 113 with the conductive portions 116 the portions 116 forming interlayer connections.<sup>3</sup> However, Tsukamoto fails to teach or suggest filling pores in the latent image with a conductive material to form a conductive portion *connected to the electrode*. As explained above, Tsukamoto first forms wirings 113 on the supported sheet 111, and then connects the sheet to the insulator sheet 114 with the conductive portions 116.

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<sup>2</sup> See Tsukamoto at column 4, lines 64-67 and in corresponding Figure 1B.

<sup>3</sup> See Tsukamoto at column 5, lines 18-35 and in corresponding Figure 1D.

In the discussion of the background art, Tsukamoto describes a hole 502 is formed in a porous member and is filled with a fluid conductive paste 503.<sup>4</sup> However, the background art of Tsukamoto does not disclose or suggest Applicants' claimed

selectively irradiating a predetermined region of the porous member, on which the electronic device is mounted, with energy beams thereby exposing the photosensitive layer to form a latent image in an irradiated or non-irradiated portion of the porous member, the predetermined region including a portion close to the electrode;  
after said selectively irradiating, filling pores in the latent image of the porous member with a conductive material to form a conductive portion connected to the electrode.

Ikeda does not cure the deficiencies of Tsukamoto. Ikeda describes a method of manufacturing a multilayer wiring board which includes steps of impregnating a raw material composition of a thermosetting resin in a porous laminated product which includes two or more porous layers. As shown in Figure 4 of Ikeda, a hole 36 is formed in porous member 11 and a plated layer 37 is then formed in the hole 36. However, like Tsukamoto, Ikeda does not disclose or suggest Applicants' claimed

selectively irradiating a predetermined region of the porous member, on which the electronic device is mounted, with energy beams thereby exposing the photosensitive layer to form a latent image in an irradiated or non-irradiated portion of the porous member, the predetermined region including a portion close to the electrode;  
after said selectively irradiating, filling pores in the latent image of the porous member with a conductive material to form a conductive portion connected to the electrode.

With Applicants' claimed invention, by selectively irradiating a predetermined region of Applicants' porous member with energy beams, a latent image is formed in an irradiated or non-irradiated portion of the porous member. In the claimed invention, holes or throughholes are not formed in the irradiated or non-irradiated portion of the porous member.

MPEP §706.02(j) notes that to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the

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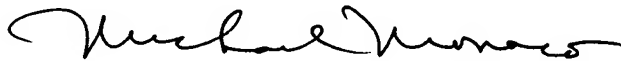
<sup>4</sup> Tsukamoto, Figures 5A-5F.

references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Also, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on Applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir.1991). Without addressing the first two prongs of the test of obviousness, Applicants submit the claimed invention is not *prima facie* obvious in view of Tsukamoto and Ikeda, because Tsukamoto and Ikeda each fail to disclose all the features of Applicants' claimed invention.

Accordingly, in view of the present amendment and in light of the previous discussion, Applicants respectfully submit that the present application is in condition for allowance and respectfully request an early and favorable action to that effect.

Respectfully submitted,

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